

REMARKS

Request for Extension of Time

Applicants respectfully request that the shortened statutory period set to expire on December 27, 2004, be extended by three months to expire on March 27, 2005.

Independent Claim 1 and dependent Claims 7 and 8 have been amended to recite that the claimed method involves classifying plant embryos according to their quantifiable characteristics. This amendment is similar to the amendment made in the parent application serial No. 09/700,037, filed July 2, 2001.

In addition, new Claim 14 has been added that recites a list of quantifiable characteristics.

Rejection Under 35 U.S.C. § 112, First Paragraph

Claims 1-13 are rejected under 35 U.S.C. § 112, first paragraph. In accordance with the request made by the Examiner on July 15, 2004, applicants submit herewith the Declaration of Inventors Timmis, Toland, Ghermay, Carlson, and Grob, setting forth facts that establish that a correlation between raw image data consisting of more than embryo perimeter data and a quantifiable characteristic of an embryo of unknown quality can be established as recited in Claims 1-13, and that Claims 1-13 satisfy the requirements of 35 U.S.C. § 112, first paragraph.

Rejection Under 35 U.S.C. § 112, Second Paragraph

Claims 1-13 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that applicants regard as the invention. The Examiner's Action states that it is unclear what exactly "quality" of an embryo is in the instant claims. As noted above, applicants have amended Claims 1-13 to remove reference to quality and replace it with the phrase "quantifiable characteristics."

As detailed in the present specification at page 6, lines 32-33, the quantifiable characteristics are "any embryo quality that is amenable to characterization." Specific examples

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of embryo quality susceptible to characterization include conversion potential, resistance to pathogens, drought resistance, heat and cold resistance, salt tolerance, preference for light quality, suitability for long term storage, or any other plant quality susceptible to quantification. See page 6, line 37 through page 7, line 7. Thus, Claim 1 is directed to a method for classifying plant embryos according to their "quantifiable characteristics." Clearly, these can be the quantifiable characteristics relating to plant embryo quality described above, but the method that applicants claim as their invention is not necessarily limited to those specific quantifiable characteristics. It is not applicants' intent that Claim 1 be limited to specific quantifiable characteristics. Thus, applicants assert that Claims 1-13 do claim the subject matter that applicants regard as their invention.

Focusing more specifically on dependent Claims 7 and 8, these dependent claims more specifically define the quantifiable characteristics and therefore more narrowly define the subject matter that applicants regard as their invention. Finally, turning to new Claim 14, like Claims 7 and 8, new Claim 14 more narrowly defines the quantifiable characteristics recited in Claim 1. Clearly, Claims 7, 8 and new Claim 14 recite subject matter that applicants regard as their invention.

For the foregoing reasons, applicants assert that the subject matter of Claims 1-14 satisfy the requirements of 35 U.S.C. § 112, second paragraph.

Rejections Under 35 U.S.C. §§ 102/103

Claims 1-13 are rejected under 35 U.S.C. § 102 or, in the alternative, under 35 U.S.C. § 103 over Chi et al. and/or Vits et al. For the following reasons, applicants respectfully traverse this rejection.

Independent Claim 1, from which the balance of dependent Claims 2-13 depend, recites a method of classifying plant embryo quality that employs raw digital image data and

classification algorithms that use more than embryo perimeter data from the acquired raw digital image data. Chi et al. or Vits et al. disclose using morphological data, i.e., perimeter data. Chi et al. and Vits et al. do not disclose a method for classifying plant embryo quality that includes the step of performing a data analysis using more than an embryo perimeter from the acquired raw digital image data. Accordingly, the subject matter of Claims 1-13 is novel over Chi et al. and Vits et al.

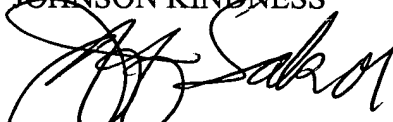
The subject matter of Claims 1-13 is also nonobvious over Chi et al. and Vits et al. because neither Chi et al. or Vits et al. suggest a method that uses more than embryo perimeter data from the acquired raw digital image data.

For these reasons, the subject matter of independent Claim 1 and the claims dependent therefrom is novel and nonobvious over Chi et al. or Vits et al. For the foregoing reasons, applicants respectfully request withdrawal of the outstanding rejection.

If the reviewing party has any questions regarding the above, he is invited to call applicants' attorney at the number listed below so that any outstanding issues can be resolved in a timely and efficient manner.

Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the U.S. Postal Service in a sealed envelope as first class mail with postage thereon fully prepaid and addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the below date.

Date:

March 15, 2005

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